

RESOURCE ALLOCATION REVIEW BOARD



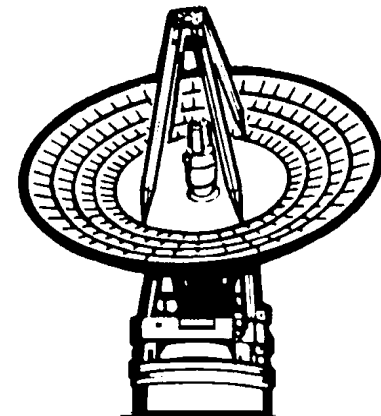
Resource Contention

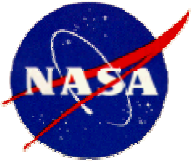
Version 1.1 Preliminary

2006 - 2008

Napoleon Lacey

August 9, 2005



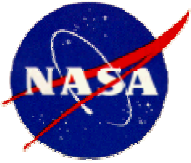


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Agenda

- ◆ **Loading Study**
- ◆ **Periods of Contention**
- ◆ **Events, Recommendations and Analyses**

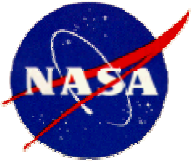


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Loading Study

- ◆ **RARB Assumptions**
- ◆ **Project Changes**
- ◆ **New Projects**
- ◆ **Changes in DSN Resource Support Request**
- ◆ **DSN User / Mission Planning Set**
 - Ongoing / Approved Projects
 - Advanced / Planning Projects
- ◆ **Major DSN Downtimes by Date**
- ◆ **IND Resource Implementation Planning Matrix**

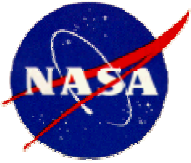


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RARB Assumptions

- ◆ DSS-16 is scheduled for an indeterminate downtime starting January 30, 2006. The previous designation of 26M meaning DSS-16,46,66 will now equate to DSS-46,66. All support previously assigned to DSS-16 has been reassigned to DSS-27 or DSS-24.
- ◆ The following Project/User requirements were not considered during the RARB analysis process and will be negotiated during the Mid-Range Scheduling Process:
 - ATOT – Development (4 - 8 hour supports); Mission (8 hour supports)
 - DSN - (Antenna and ZDD Calibrations)
 - GBRA - Guest Observations (4 – 8 hour supports); PRA-GAVT (all supports); Host Country 4 – 8 hour supports
 - GSSR - (GODR supports at DSS-14/15)
 - MER 1 & 2 - Uplink and Downlink MSPA passes
 - RFC - Clock Sync and CAT M&E S/X and X/Ka-band VLBI
 - Space Geodesy Programme



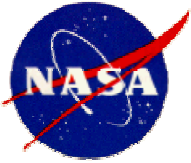
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Project Changes Since February 2005 RARB



- ◆ **Kepler**
 - Launch date changed from 10/01/07 to 06/01/08
 - End of Prime Mission changed from 07/01/11 to 06/30/12
- ◆ **Lunar - A**
 - Launch date changed from 08/01/07 to 08/01/09
 - End of prime mission changed from 02/04/08 to 03/10/10
- ◆ **Mars Opportunity Rover**
 - End of extended mission changed from 09/30/06 to 09/30/07
- ◆ **Mars Spirit Rover**
 - End of extended mission changed from 09/30/06 to 09/30/07
- ◆ **Phoenix**
 - Moved from Advanced Planning Projects to Ongoing/Planned Projects
- ◆ **Polar**
 - End of extended mission changed from 09/30/05 to 12/31/06
- ◆ **SELENE**
 - Launch date changed from 11/01/06 to 02/01/07
 - End of prime mission changed from 11/21/06 to 02/21/07



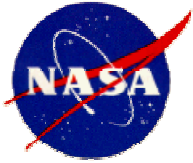
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Project Changes Since February 2005 RARB



- ◆ **Stereo Ahead and Stereo Behind**
 - Launch date changed from 02/11/06 to 04/11/06
 - End of Prime Mission changed from 05/16/08 to 07/13/08
 - End of Extended Mission changed from 05/17/11 to 07/13/11
- ◆ **Wilkinson Microwave Anisotropy Probe**
 - End of extended mission changed from 09/30/08 to 09/30/09
- ◆ **Wind**
 - End of extended mission changed from 09/30/06 to 12/31/06



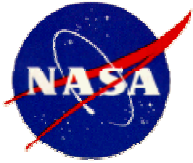
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New Projects Since February 2005 RARB



Project	Acronym	Launch or Start	EOPM	EOEM
Juno	JUNO	06/08/09	08/09/15	TBD



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JPL Changes in DSN Resource Support since February 2005 RARB

◆ GSSR

- 2006 - Added six 8-hour Asteroid 2004 XP14 supports in mid-June

◆ INTEGRAL

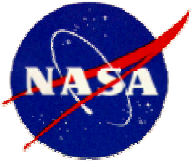
- Reduced DSN support from 7 passes per week to 3 passes per week

◆ Mars Express Orbiter

- 2008 – Added two 4-hour passes per week at DSS-43 for R/S Bi-Static Radar early January to mid-May
- 2008 – Added 7 passes per week at DSS-15, 65 from mid-May to late August for Occultation
- 2008 - Added one 4-hour pass per month at DSS-43 for R/S Bi-Static Radar

◆ Mars Telecommunications Orbiter – 2009

- 2009 – Added one Delta DOR supports (DSS-25/34, DSS-25/54) per week from mid-October to mid-June
- 2010 – Added two to four Delta DOR supports (DSS-25/34, DSS-25/54) per week from mid-June to Mid-Aug
- 2010 – Added 34BWG1 continuous coverage from late August to mid-September for Relay support



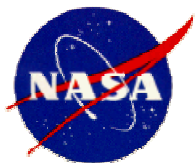
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JPL Changes in DSN Resource Support since February 2005 RARB

◆ Rosetta

- 2006 – Added one DSS-14\43 Delta DOR support in November and December
- 2006 – Added one DSS-14\63 Delta DOR support in November and December
- 2007 – Added 2 – 3 DSS-14\43 Delta DOR supports per week during January and February
- 2007 – Added one DSS-14\63 Delta DOR support in late February



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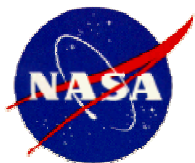
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DSN User / Mission Planning Set



– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
DSN Antenna Calibration	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
DSN ZDD Calibration	DSN	11/01/04	--	--
European and Global VLBI Systems	EGS	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Reference Frame Calibration (Cat M&E and Clock Sync)	DSN	--	--	--
Space Geodesy	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	09/30/06
Voyager 1	VGR1	09/05/77	12/31/80	09/30/06
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Ulysses	ULYS	10/06/90	09/11/95	03/30/08
Geotail	GTL	07/24/92	07/24/95	09/30/06
Wind	WIND	11/01/94	11/01/97	12/31/06
SOHO	SOHO	12/02/95	05/02/98	12/31/08
Polar	POLR	02/22/96	08/23/97	12/31/06
Gravity Probe B (non Spacecraft support)	GPB	06/01/96	08/31/05	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	11/03/08



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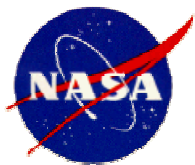
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DSN User / Mission Planning Set



– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Advance Composition Explorer	ACE	08/25/97	02/01/01	09/30/10
Cassini	CAS	10/15/97	06/30/08	06/30/10
Stardust	SDU	02/07/99	02/15/06	- - -
Chandra X-ray Observatory	CHDR	07/23/99	07/24/09	07/24/14
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	05/30/02	09/30/10
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	12/31/09
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	12/31/09
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	12/31/09
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	12/31/09
Mars Odyssey 2001	M01O	04/07/01	08/24/04	11/30/08
Wilkinson Microwave Anisotropy Probe	WMAP	06/30/01	10/01/03	09/30/09
Advanced Tracking and Observational Techniques (ATOT)	ATOT	02/01/02	12/31/08	- - -
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/31/08
Hayabusa (MUSES - C)	MUSC	05/09/03	06/10/07	- - -
Mars Express Orbiter	MEX	06/02/03	02/11/06	12/31/08
Spirit (Mars Exploration Rover - A)	MER2	06/10/03	04/06/04	09/30/07
Opportunity (Mars Exploration Rover - B)	MER1	07/07/03	04/27/04	09/30/07



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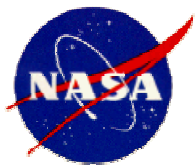
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DSN User / Mission Planning Set



– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Spitzer Space Telescope (SIRTF)	STF	08/25/03	02/25/06	10/19/08
Rosetta	ROSE	02/26/04	12/31/15	---
Messenger	MSGR	08/03/04	03/19/12	---
Deep Impact	DIF	01/12/05	08/05/05	---
Mars Reconnaissance Orbiter	MRO	08/10/05	12/31/10	12/31/15
Venus Express	VEX	10/26/05	04/09/06	TBD
New Horizons	NHPC	01/11/06	04/17/16	TBD
Stereo Ahead	STA	04/11/06	07/13/08	07/13/11
Stereo Behind	STB	04/11/06	07/13/08	07/13/11
Space Technology 5	ST5	02/28/06	06/11/06	TBD
Dawn	DAWN	06/17/06	01/12/16	TBD
Lunar - A	LUNA	08/01/09	03/10/10	---
Phoenix	PHX	08/03/07	10/26/08	TBD
Kepler	KLM	06/01/08	06/30/12	---



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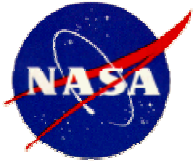
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DSN User / Mission Planning Set



– Advanced / Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
SELENE	SELE	02/01/07	02/21/07	TBD
Lunar Reconnaissance Orbiter	LRO	11/15/08	TBD	TBD
Juno	JUNO	06/06/09	08/09/15	TBD
Mars Telecommunications Orbiter 2009	MTO	09/22/09	08/19/20	TBD
Mars Science Laboratory 2009	MSL	10/25/09	03/04/12	TBD
Space Interferometry Mission	SIM	02/14/10	08/30/20	TBD
James Webb Space Telescope	JWST	08/01/11	07/31/16	TBD
Mars Placeholder 2011	M11L	10/30/11	09/10/14	TBD
Mars Placeholder 2013	M13O	11/28/13	08/21/16	TBD



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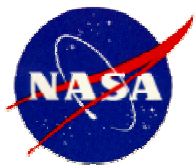
DSN Major Downtimes by Date

– 2006 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 63	Antenna Controller Replacement	5/22/2006	09/03/2006	105	21 – 35	142	246
DSS 45	Antenna Controller Replacement - Cancelled	10/9/2006	12/10/2006	63	41 – 49	247	344
DSS 45	Antenna Controller Replacement and Antenna Controller Drive Cabinet Refurbishment – Proposed	9/4/2006	12/10/2006	98	36 – 49	282	344

Note:

DSS-45 downtime changes above are to reflect an extension to the existing Antenna Controller Replacement downtime of 5 weeks for Antenna Controller Drive Cabinet Refurbishment in weeks 36 – 40 of 2006.



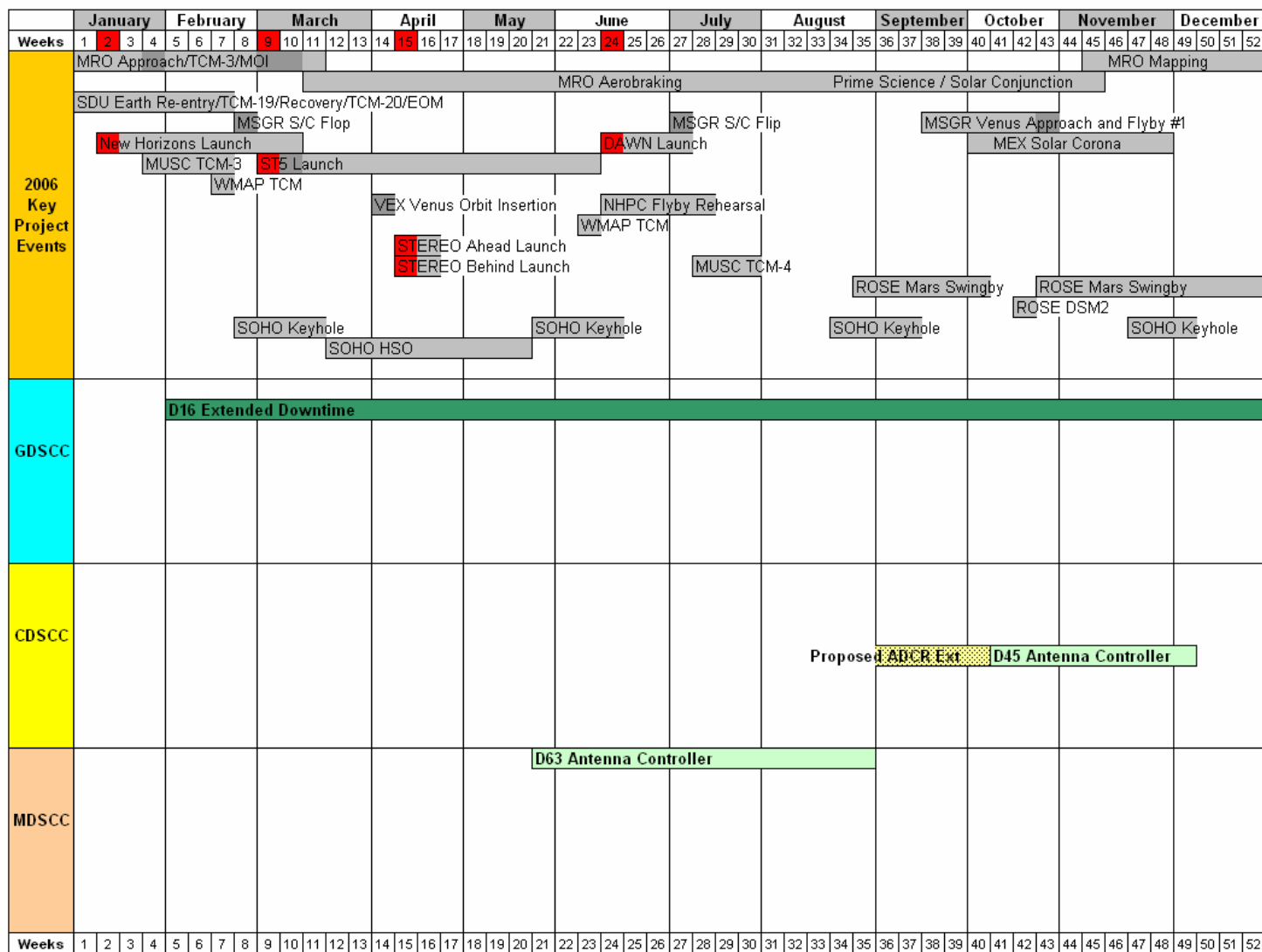
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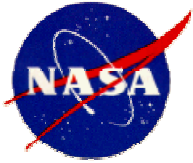
DSN Major Downtimes by Date



– 2006 –



Revised: July 15, 2005



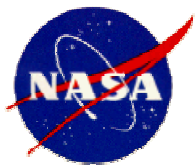
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DSN Major Downtimes by Date

– 2007 –

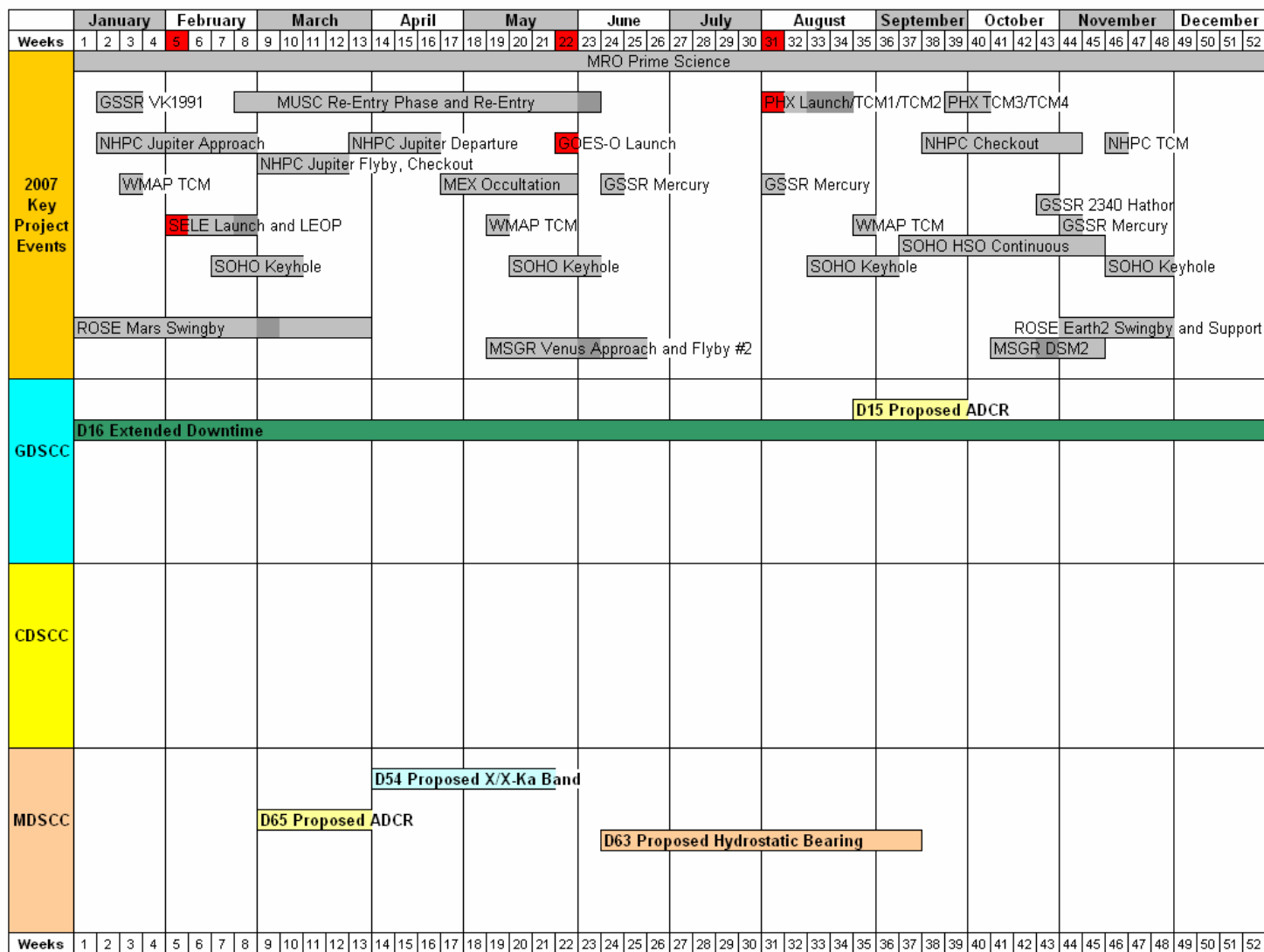
Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 65	Antenna Drive Cabinet Refurbishment - Proposed	02/26/2007	04/01/2007	35	09 – 13	057	091
DSS 54	X/X-Ka Band - Proposed	04/02/2007	05/27/2007	56	14 – 21	092	147
DSS 63	Hydrostatic Bearing Assembly Replacement - Proposed	06/12/2007	09/16/2007	97	24 – 37	163	259
DSS 15	Antenna Drive Cabinet Refurbishment - Proposed	08/27/2007	09/30/2007	35	35 – 39	239	273



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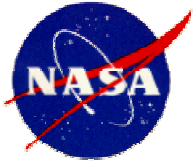
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DSN Major Downtimes by Date



Revised: July 15, 2005

– 2007 –



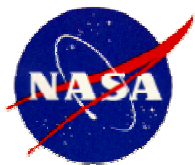
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DSN Major Downtimes by Date

– 2008 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 43	Life Extension - Proposed	09/29/2008	03/29/2009	181	40 - 13	273	088

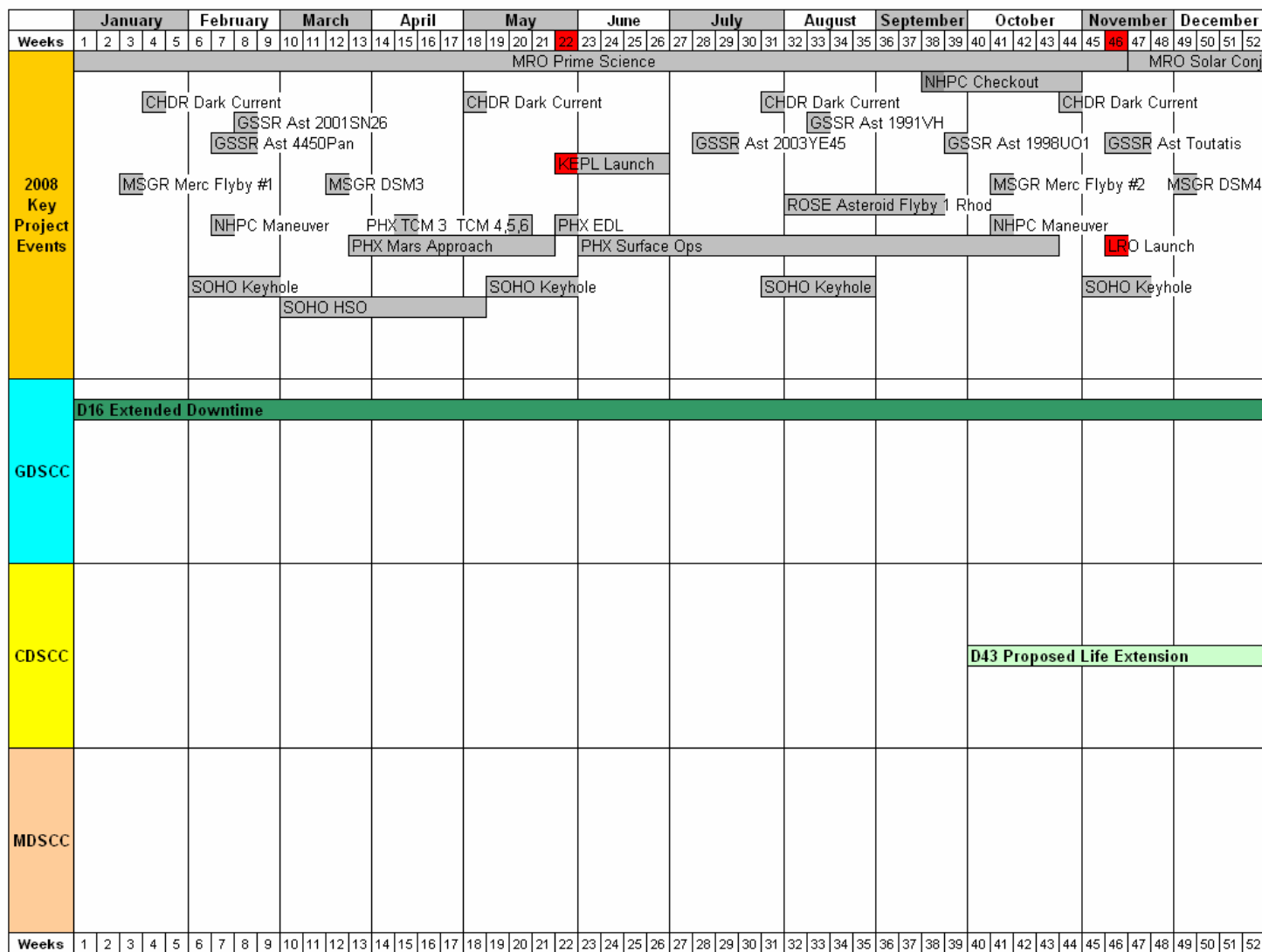


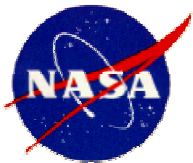
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DSN Major Downtimes by Date

– 2008 –





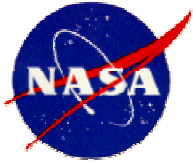
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IND Resource Implementation Planning Matrix

Complex	Station	Subnet	S-Band		X-Band		Ka-Band		NSP
			Down	Up	Down	Up	Down	Up	
10	DSS-14	70M	✓	✓	✓	✓	N/A	N/A	✓
10	DSS-15	34HEF	✓	N/A	✓	✓	N/A	N/A	✓
10	DSS-16	26M	✓	✓	N/A	N/A	N/A	N/A	N/A
10	DSS-24	34B1	✓	✓	✓	✓	N/A	N/A	✓
10	DSS-25	34B2	N/A	N/A	✓	✓	✓	✓	✓
10	DSS-26	34B2	N/A	N/A	✓	✓	10/01/05	N/A	✓
10	DSS-27	34HSB	✓	✓	N/A	N/A	N/A	N/A	10/01/05
40	DSS-34	34B1	✓	✓	✓	✓	10/01/05	N/A	✓
40	DSS-43	70M	✓	✓	✓	✓	N/A	N/A	✓
40	DSS-45	34HEF	✓	N/A	✓	✓	N/A	N/A	✓
40	DSS-46	26M	✓	✓	N/A	N/A	N/A	N/A	N/A
60	DSS-54	34B1	✓	✓	✓	✓	08/01/07	N/A	✓
60	DSS-55	34B2	N/A	N/A	✓	✓	10/01/05	N/A	✓
60	DSS-63	70M	✓	✓	✓	✓	N/A	N/A	✓
60	DSS-65	34HEF	✓	N/A	✓	✓	N/A	N/A	✓
60	DSS-66	26M	✓	✓	N/A	N/A	N/A	N/A	N/A
N/A = Capability Not Planned xx/xx/xx = Capability Date Recently Change As of: 07/07/05 ✓ ✓ ✓ = Capability Recently Exists ✓ = Capability Exists									



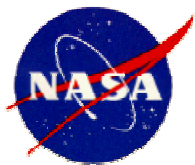
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Periods of Contention



RFC	Remaining contentions to be resolved in JURAP and Mid-Range Scheduling
The months indicated will be considered for the August RARB	

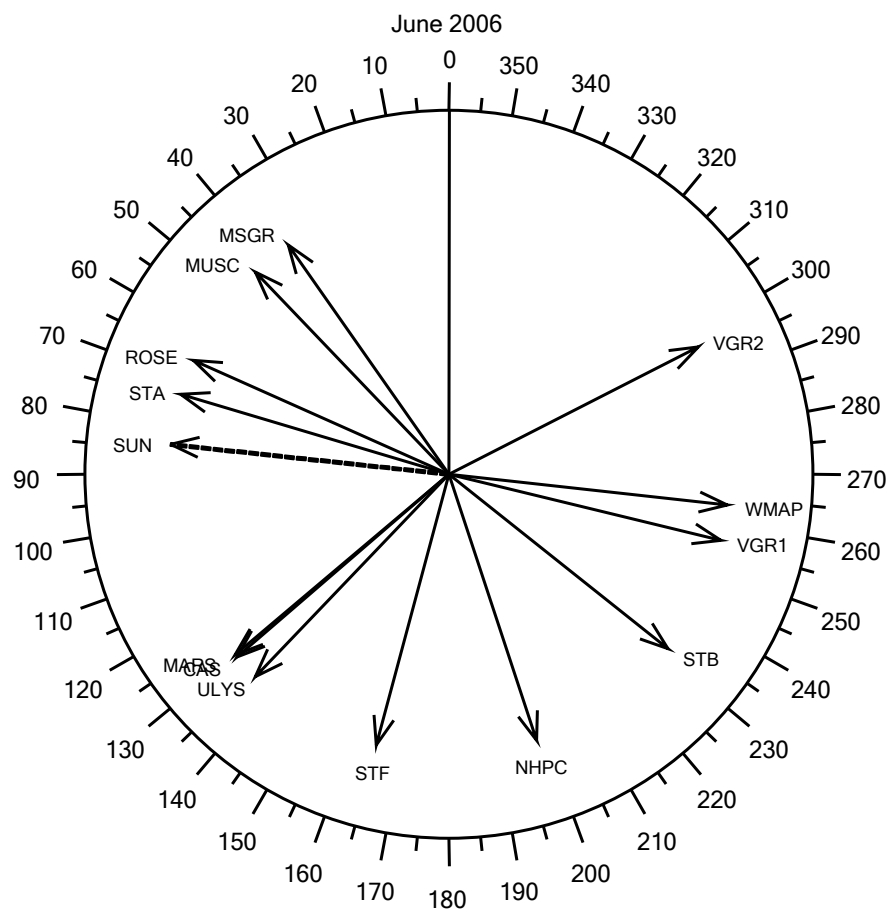
Month	Weeks	
	2006	2007
January		
February		
March		09 – 13
April		14 – 17
May		18 – 22
June		23 – 26
July		27 – 30
August		31 – 35
September	36 – 39	36 – 39
October	40 – 43	
November		
December		



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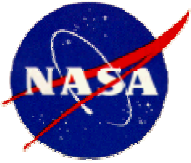
Spacecraft Right Ascension

June 15, 2006



THE SPACECRAFT RIGHT ASCENSION FIGURES SHOW THE POSITIONS OF THE SPACECRAFT IN THE SKY RELATIVE TO EACH OTHER ON THE 15TH OF EACH MONTH FOR THE YEAR INDICATED. RIGHT ASCENSION IS COMMONLY MEASURED IN HOURS, WITH 1 HOUR = 15 DEGREES.

THE ARROW INDICATES THE CENTER OF A SPACECRAFT VIEW FROM EARTH. EXTEND 60 DEGREES ON BOTH SIDES OF THE ARROW TO CALCULATE AN EIGHT (8) HOUR VIEW PERIOD.



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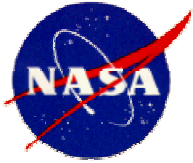
Events, Recommendations and Analyses



- ◆ The RARB Redbook makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.
 - Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is an estimate of the amount of requested time, typically in percentage of requirements or modified requirements, that is unsupportable, based on resource availability, other users' requirements, assumed priorities, and view periods. The following percentages apply:

Low/Workable	= <20%
Moderate	= 20% to 30%
Severe	= 31% to 45%
Extreme	= >45%

Workable is a term used to express a condition wherein the projected unsupportable time is low. This condition occurs when the general forecasting analysis indicates a low percentage of unsupportable time or when RARB agreements have been made to reduce contention to a workable level. Workable essentially means that experience has shown that the remaining contention may be solved during final schedule preparations and negotiations.

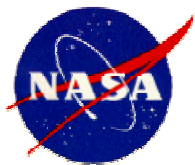


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Events, Recommendations and Analyses



2006 Events, Analysis and Recommendations

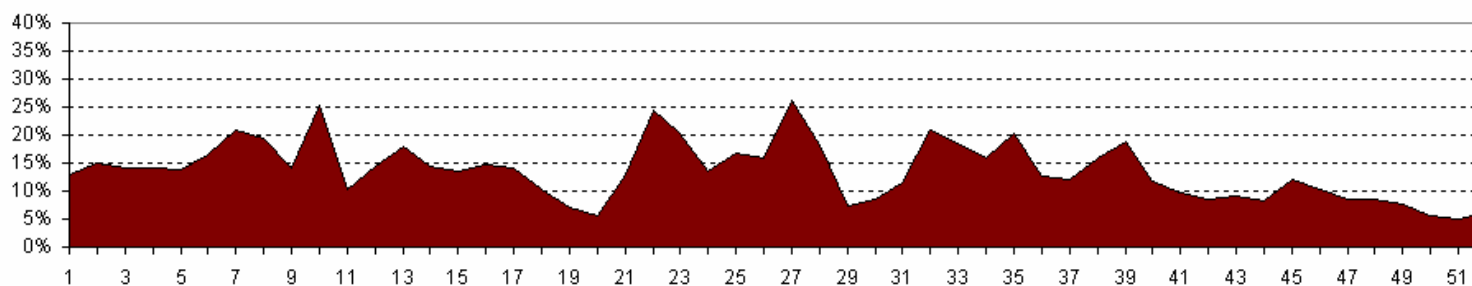


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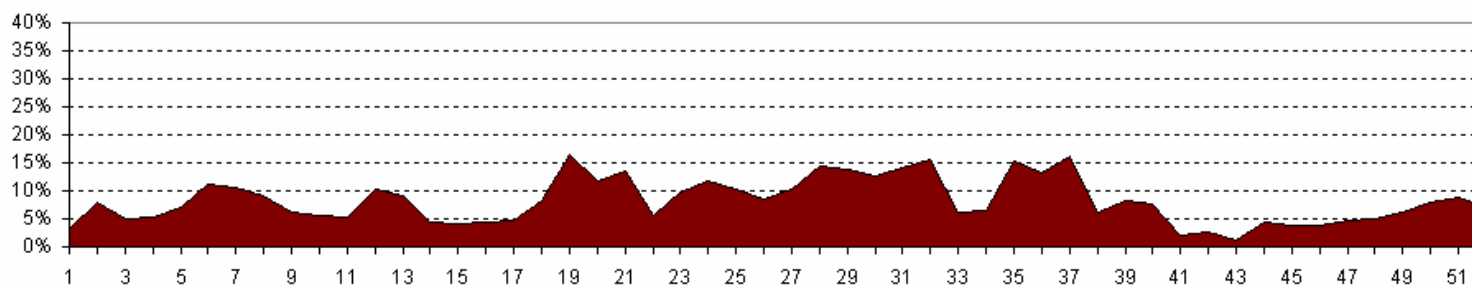
Events, Recommendations and Analyses

2006 Weekly Average User Unsupportable Time

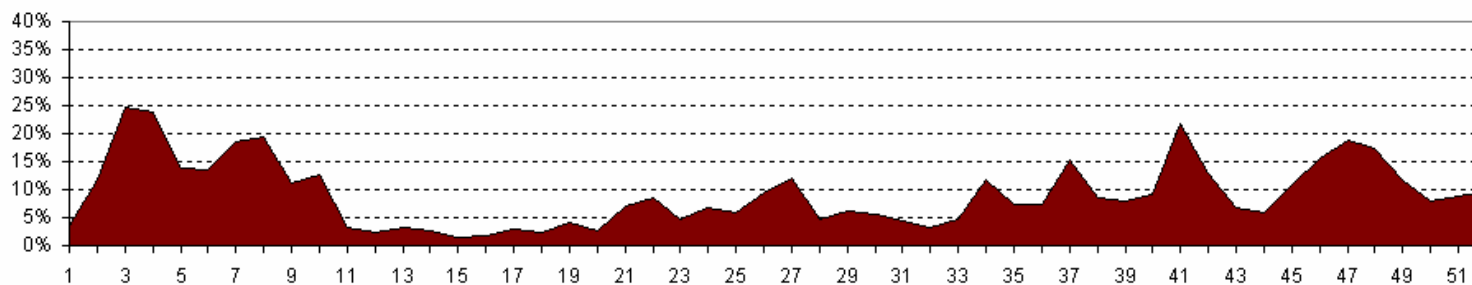
70M

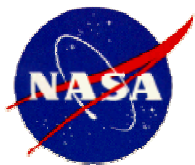


34HEF



34BWG1



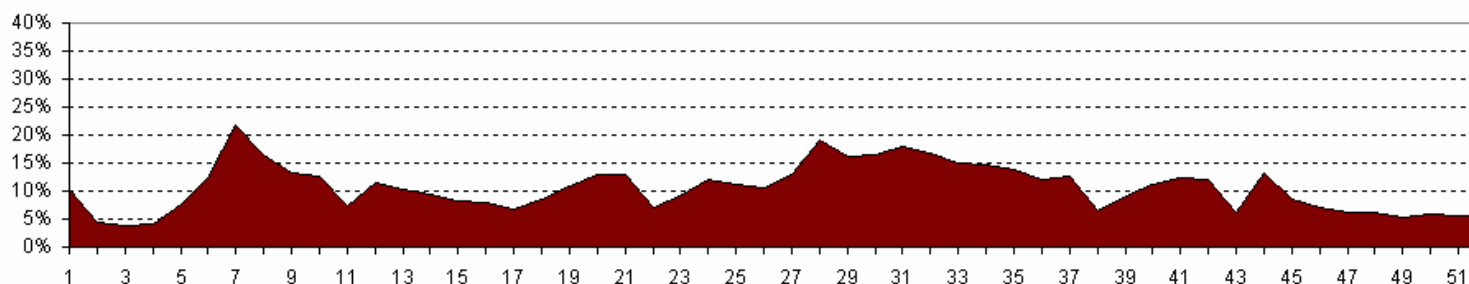


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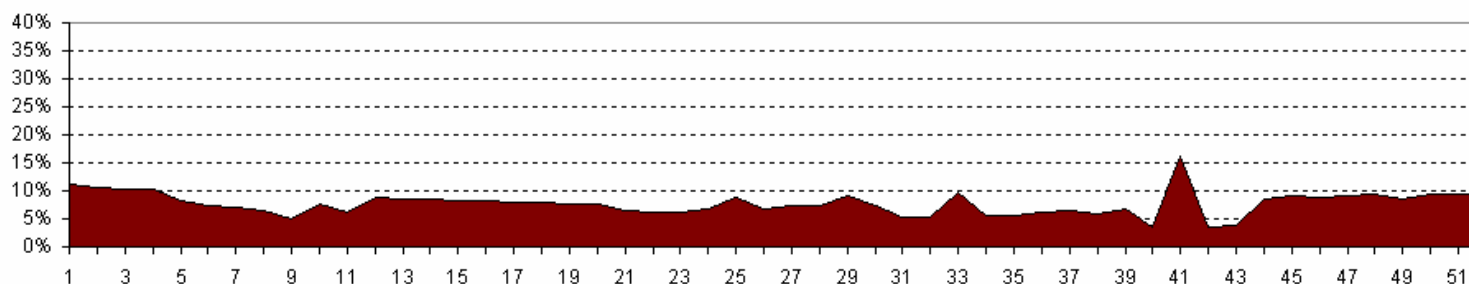
Events, Recommendations and Analyses

2006 Weekly Average User Unsupportable Time

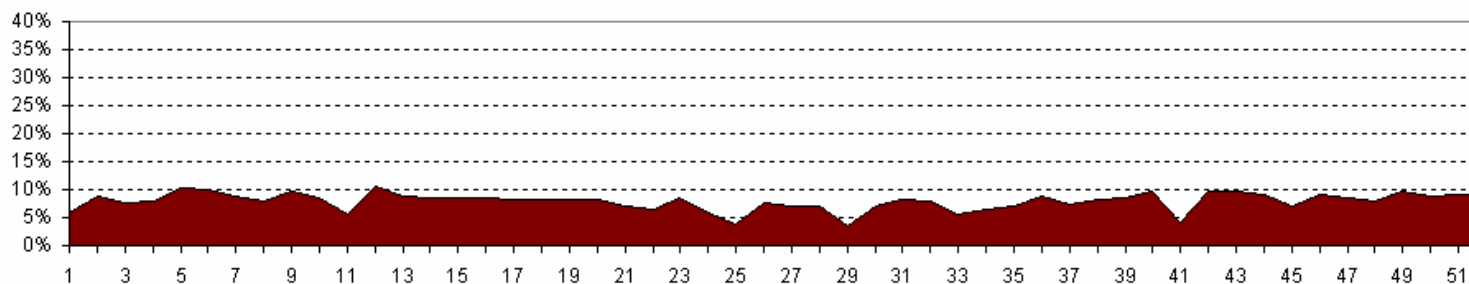
34BWG2

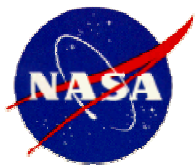


34HSB



26M





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39)

EVENTS

**DSS-45 proposed downtime (Antenna Drive Cabinet Refurbishment)
beginning in week 36**

ATOT A01 Astrometry 24-hour semi-annual event at DSS-43 in week 36

Cassini Tour

GSSR Asteroid 2001 CB21 beginning in week 39

**Mars Express Bi-Static Radar in week 37, Orbital Science in weeks 36 and 37 and Solar
Corona R/S beginning in week 38**

**Mars Reconnaissance Orbiter Aerobraking continuous support ending in week 37, DOY
256 and Transition to Prime Science in week 37, DOY 257**

MESSENGER Delta DOR support beginning in week 39

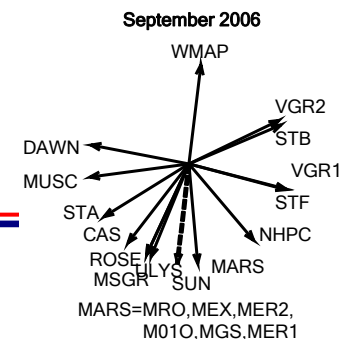
New Horizons Delta DOR support in weeks 37 and 38

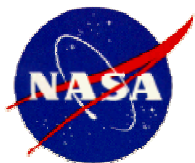
Rosetta Mars Swingby beginning in week 36, DOY 250

SOHO Keyhole event ending in week 37, DOY 259

STEREO Ahead Prime Science

STEREO Behind Prime Science





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

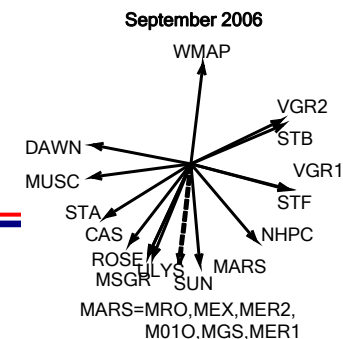
2006 – September (Weeks 36 - 39)

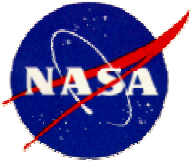


EVENTS

Voyager 2 DTR P/B in week 36, DOY 249, ASCAL and MAGROL in week 37, DOY 255 and 258

Wilkinson Microwave Anisotropy Probe TCM in week 39, DOY 274





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-45 downtime for Antenna Drive Cabinet Refurbishment.

Reduce DSS-15 Maintenance from 8 hours to 6 hours in weeks 37 and 39. Reduce DSS-25 Maintenance from 8 hours to 6 hours in week 37 and 39. Reduce DSS-26 Maintenance from 8 hours to 6 hours. (2,4)

CLU2 SSO move supports from DSS-46/34/45/43 to DSS-46/34/43 in weeks 36, 38 and 39; move supports from DSS-46/34/45 to DSS-46/34/43 in week 37 and move CLU4 MSO supports from DSS-46/34/45/43 to DSS-46/34/43 in week 36. (2)

DAWN move all passes from the 34HEF to DSS-15,65. (2)

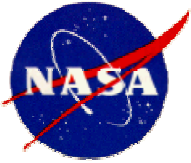
GSSR Asteroid 2001 CB21 reduce support duration from 8 hours to 6 hours at DSS-14 in week 39. (1)

M01O Mapping and MSPA with MGS Mapping reduce all 70M passes from 10 hours to 8 hours. (1)

MEX R/S Solar Corona reduce all DSS-14,63 passes from 10 hours to 8 hours. (1)

MGS Mapping and MSPA with M01O Mapping reduce all 70M passes from 10 hours to 8 hours. (1)

MRO Aerobraking move supports from DSS-15,45,55 to DSS-15,34,55 in weeks 36 & 37 and move Transition to Prime Science supports from DSS-15,45,55,65 to DSS-15,34,55,65 in weeks 37-39. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

MSGR Cruise move all supports from DSS-26,45,65 to DSS-26,34,65 and move Delta DOR supports from DSS-15/45 to DSS-15/34 in week 39. (2)

NHPC move 2 passes in week 36 and 1 pass each in weeks 37 and 38 from the 34HEF to DSS-24,54. (2)

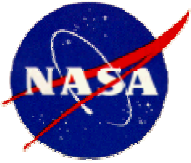
ULYS reduce pass duration from 5 hours to 4 hours and move all passes from DSS-14,43 to DSS-24,34. (1)

VGR1 move all passes from DSS-14 in week 36 and from DSS-25,26 in weeks 37 – 39 to DSS-24,25,15. Move all D/L passes from DSS-63,65 to DSS-54,55,65,63 and reduce pass duration from 6 hours to 4 hours . (2,4)

VGR2 move all passes from DSS-43,45,34 to DSS-43,34 and reduce pass duration from 8 hours to 4 hours. (2)

Note:

RFC Cat M&E S/X-Band simultaneous 24-hour supports at DSS-15/65 in week 32 and X/Ka-Band supports at DSS-26/34 in week 39 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2 SSO, MEX, MGS, MRO, MSGR, NHPC, SOHO, STA, STB, ULYS, VGR1 and VGR2.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

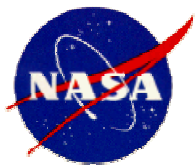
2006 – September (Weeks 36 - 39) (continued)



ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for DSS Bearing and Routine Maintenance, MEX R/S Solar Corona, and SOHO Keyhole event. The projected unsupportable time is due to view period overlap with DSS Maintenance (daylight), Mars mission, SOHO and VGR2 view periods; compounded by proposed DSS-45 downtime.
2. (34HEF) The projected unsupportable time is moderate to extreme for DSS Maintenance, MEX R/S MSPA with MGS, MSGR Delta DOR, NHPC Cruise, SOHO Keyhole event and VGR1. The projected unsupportable time is due to view period overlap with DSS Maintenance (daylight), Mars missions, MSGR, NHPC, SOHO and VGR1 & 2 view periods; compounded by proposed DSS-45 downtime.
3. (34BWG1) The projected unsupportable time is moderate to severe for DSS Maintenance due to view period overlap with Mars missions, MSGR, NHPC, SOHO, VGR1 & 2 and WIND view periods; compounded by RFC CAT M&E X/KA simultaneous support in week 39 and by the proposed DSS-45 downtime.
4. (34BWG2) The projected unsupportable time is severe for DSS Maintenance due to view period overlap with Mars missions, MSGR, NHPC, STA, and VGR1 view periods; compounded by RFC CAT M&E X/KA simultaneous support in week 39 and by the proposed DSS-45 downtime.

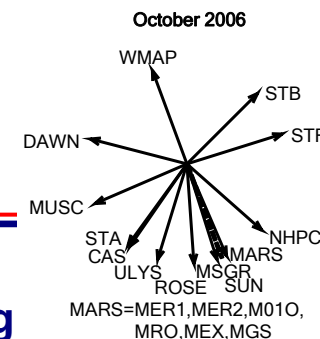
Contention levels on the 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43)



EVENTS

DSS-45 proposed downtime (Antenna Drive Cabinet Refurbishment) ending in week 40

DSS-45 approved downtime (Antenna Controller Replacement) beginning in week 41

Cassini Tour

Chandra Lunar Eclipse in week 40

Goldstone Solar System Radar Asteroid 2001 CB21 ending in week 40 and Lunar Pole Observation at DSS-13/14/15 in week 43

Mars Express Bi-Static Radar in week 43 and Solar Corona R/S

Mars Reconnaissance Orbiter Transition to Prime Science ending in week 40, DOY 279 and Solar Conjunction beginning in week 40, DOY 280

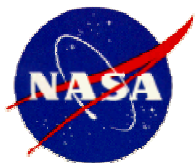
MESSENGER Delta DOR support ending in week 42 and Solar Conjunction

New Horizon Pluto – Charon L MET CCD CMD in week 40 and Maneuver in week 41

Rosetta Delta DOR in weeks 41 and 42 and Mars Swingby

STEREO Ahead Prime Science

STEREO Behind Prime Science



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

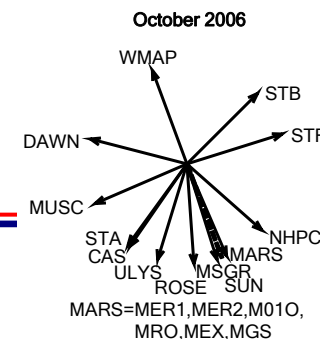
2006 – October (Weeks 40 - 43)

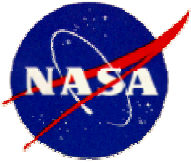
EVENTS

Venus Express Bi-Static Radar 4 on DOY 273 and Solar Corona

Voyager 1 DTR Array P/B at DSS-14/15 on DOY 298 in week 43

Wilkinson Microwave Anisotropy Probe Maneuver in week 42





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-45 downtime for Antenna Drive Cabinet Refurbishment. (2)

CAS Tour move 3 supports from the 34HEF to DSS-15,65 in week 40. (2)

CLU2 SSO delete DSS-45 from the antenna resource allocation in week 40. (2)

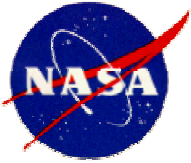
DAWN move the 1 pass from the 34HEF to DSS15,65 in week 40. (2)

GSSR Asteroid 2001 CB21 reduce support duration from 8 hours to 6 hours at DSS-14 in week 40. (1)

M01O Mapping and MSPA with MEX R/S Solar Corona reduce support duration from 10 hours to 8 hours in weeks 41 - 43. M01O Mapping and MSPA with MGS Mapping move 4 passes from 34HEF to DSS-15,65,34BWG2 in week 40 and move remaining 1 to 3 passes in weeks 41 – 43 from the 34HEF to DSS-15,65. (1)

MEX R/S Solar Corona move the 4 supports from DSS-14,63 to DSS-63 only in week 40; MEX R/S MSPA with M01O Mapping and MSPA with MGS Mapping reduce all pass duration from 10 hours to 8 hours in weeks 41 through 43. (1)

MGS Mapping and MSPA with M01O Mapping move 4 passes from 34HEF to DSS-15,65,34BWG2 in week 40 and move remaining 1 to 3 passes in weeks 41 – 43 from 34HEF to DSS-15,65. MGS Mapping move 1 support each in weeks 40 and 43 from 34HEF to 34BWG2 and move remaining 1 to 2 passes to DSS-15,65 in weeks 41 – 43. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses



2006 – October (Weeks 40 - 43)

RECOMMENDATIONS

MRO Solar Conjunction move 4 passes from the 34HEF to DSS-15,43,65 in weeks 40 and 43; Transition to Prime Science move 3 of 8 passes from DSS-26,45, 55 to the 34BWG1 and move the remaining 5 passes to DSS-26,34,55 in week 40. (2,3)

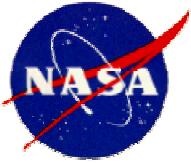
MSGR Cruise move 3 passes from DSS-26,45,65 to the 34BWG1 subnet in week 40; move 6 of 7 passes from DSS-26,34,55 to DSS-26,55 and move the remaining 1 pass to DSS-34 in week 41. (2,3)

STA Prime Science move 7 passes from DSS-25,34,55 to the 34BWG1 subnet in week 40 and move 6 passes from DSS-25,34,55 to DSS-25,55 and remaining 1 pass to DSS-34 in week 41. (3,4)

ULYS reduce pass duration from 5 hours to 4 hours and reduce the number of supports per week from 7 to 4. (1,3)

VEX Bi-Static Radar move support from DSS-45 to DSS-43 in week 40; move Solar Corona support from the 34HEF to DSS-15,65,25,34 in weeks 40 and 41. (2)

VGR1 move 7 passes from DSS-25,26 to DSS-24,25,26,15,14; move 7 passes from DSS-55 to DSS-54,55,65,63 and reduce all pass duration from 6 hours to 4 hours in weeks 40 and 41. (4)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses



2006 – October (Weeks 40 - 43)

RECOMMENDATIONS

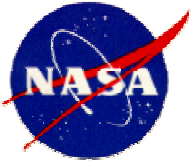
VGR2 move all supports from DSS-43,34 to DSS-43 only and reduce pass duration from 8 hours to 4 hours. (1,3)

WIND move all supports from 34BWG1 to DSS-24,54. (3)

Note:

RFC CAT M&E S/X-Band simultaneous 24-hour supports at DSS-14/43 in week 41 and DSS-15/65 in week 42 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2, DAWN, M01O, MEX, MGS, MRO, MSGR, ULYS and VGR2.

RFC CAT M&E X/Ka-Band simultaneous 24-hour supports at DSS-26/55 in week 40 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, MGS, MRO, MSGR, ROSE, STA, STB, STF, ULYS, VGR1 & 2 and WMAP.



RESOURCE ALLOCATION REVIEW BOARD

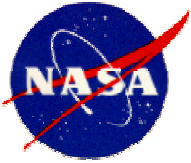
Events, Recommendations and Analyses



2006 – October (Weeks 40 - 43)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe due to oversubscription of the subnet and view period overlap between CAS, DSS Maintenance, GSSR Asteroid 2001 CB21, Mars missions, STF, ULYS, and VEX. DSS-43 is particularly oversubscribed due to off-load of DSS-45 to accommodate the planned and approved antenna downtime. The missions impacted are DSS Bearing and Routine Maintenance, M01O Mapping, MSPA with MEX, and MGS, MEX, Solar Corona, MSPA with M01O and MGS, and ULYS.
2. (34HEF) Moderate to severe unsupportable time is projected for DSS Maintenance, MGS Mapping and MGS MSPA with M01O, MSGR and VGR1. The unsupportable time is due to oversubscription of the subnet in the daylight view period compounded by the planned downtime for DSS-45.
3. (34BWG1) The projected unsupportable time is moderate to severe for DSS Maintenance, MSGR Delta DOR, NHPC Maneuver, STA Prime Science, VGR2 and WIND and extreme for MRO Solar Conjunction and MSGR Cruise and ULYS. The projected unsupportable time is due to view period overlap and oversubscription of DSS-34 due to off-load of DSS-45 to accommodate the proposed and approved antenna downtimes.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

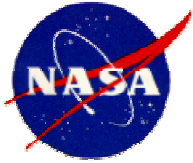


2006 – October (Weeks 40 - 43)

ANALYSES

4. (34BWG2) The projected unsupportable time is moderate to severe due to oversubscription of the subnet and view period overlap in the daylight and Mars view period. Moderate unsupportable time is projected for MGS MSPA with M01O, MRO Transition to Prime Science, NHPC, ROSE, and VGR1. Severe unsupportable time is projected for DSS Maintenance and MGS Mapping.

Contention levels on the 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

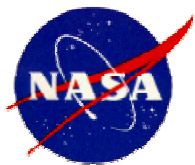


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses



2007 Events, Analysis and Recommendations

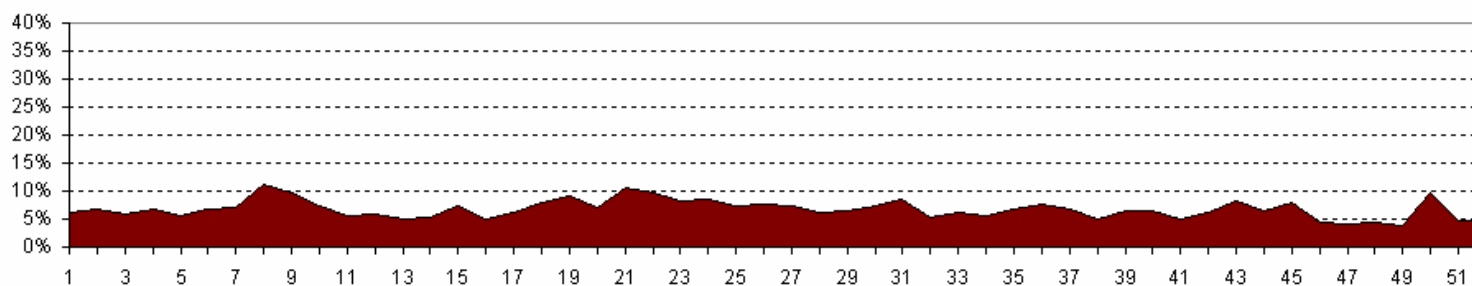


RESOURCE ALLOCATION REVIEW BOARD

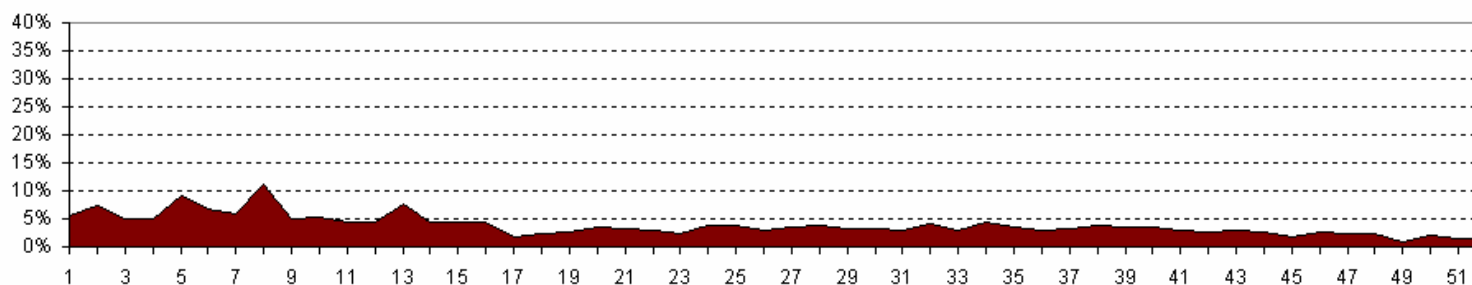
Events, Recommendations and Analyses

2007 Weekly Average User Unsupportable Time

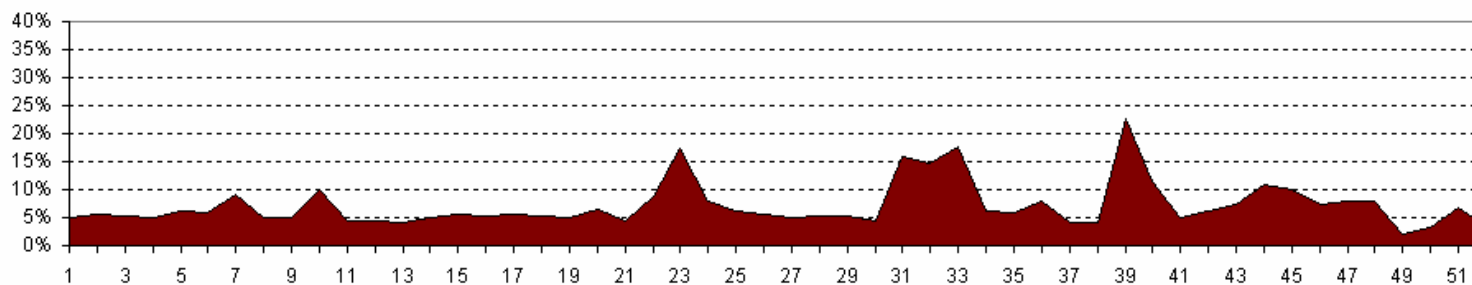
70M

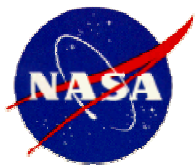


34HEF



34BWG1



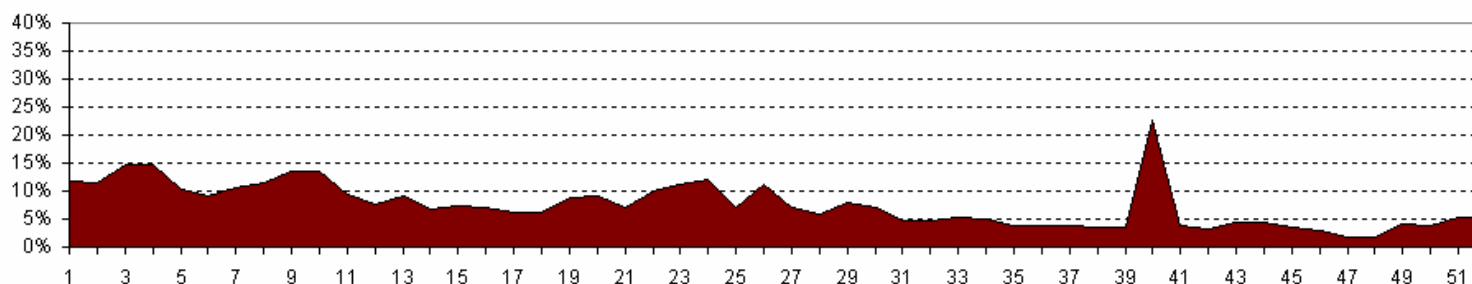


RESOURCE ALLOCATION REVIEW BOARD

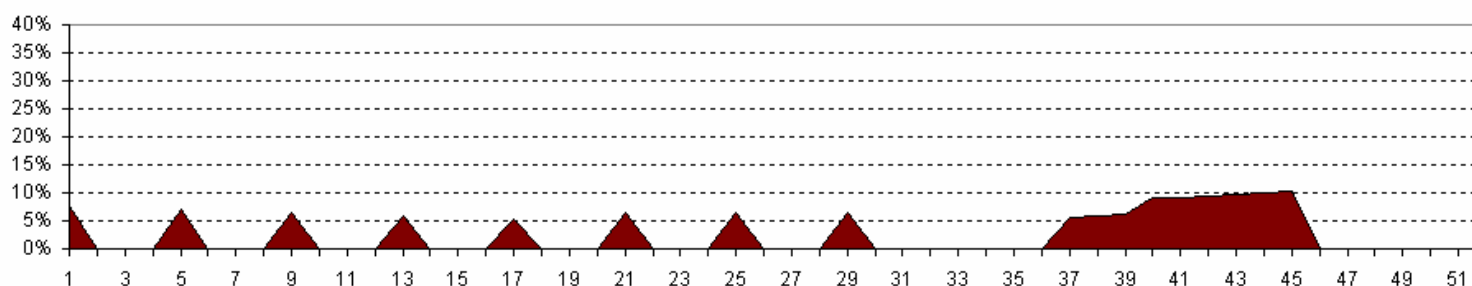
Events, Recommendations and Analyses

2007 Weekly Average User Unsupportable Time

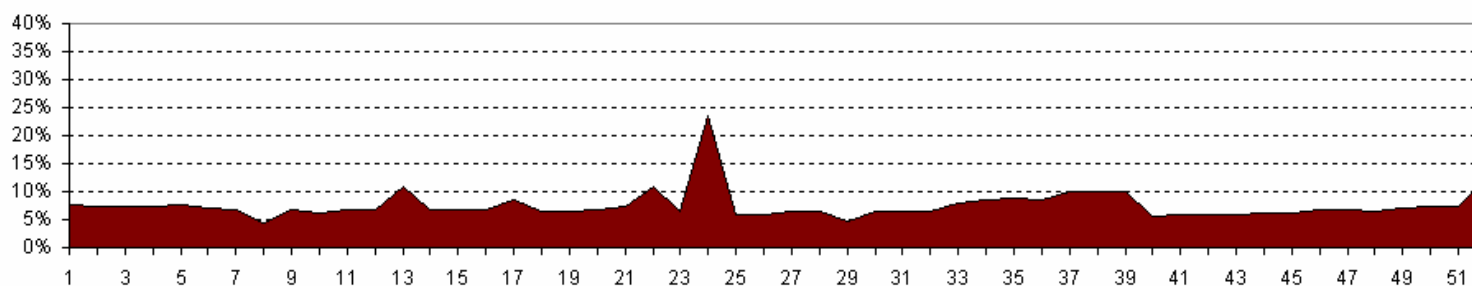
34BWG2

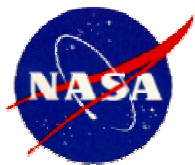


34HSB



26M





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13)

EVENTS

**DSS-65 proposed downtime (Antenna Cabinet Drive Refurbishment)
beginning in week 09, ending in week 13**

Cassini Tour

Chandra ACA Dark Current measurement and Lunar Eclipse in week 10

GSSR Mercury Radar observations at DSS-14 in weeks 09

Hayabusa (MUSES-C) Earth Re-Entry Phase

Mars Reconnaissance Orbiter Ka Ops Demo and Prime Science

Mars Express Bi-Static Radar in week 11 and Orbital Science

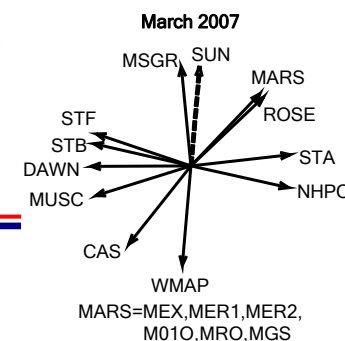
New Horizons Jupiter Flyby ending week 10, DOY 069, Departure beginning week 10

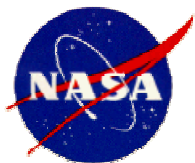
Rosetta Mars Swingby ending in week 13, DOY 085

SOHO Keyhole event ending in week 10, DOY 064

STEREO Ahead Prime Science

STEREO Behind Prime Science





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13)

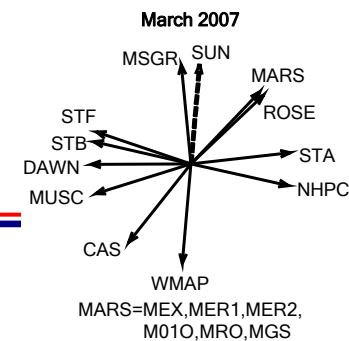


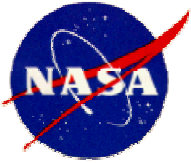
EVENTS

Ulysses Nutation

Voyager 1 MAGROL in week 12, DOY 082

Voyager 2 DTR P/B in week 10, DOY 067, ASCAL on DOY 071 and MAGROL on DOY 074 in week 11





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13) (continued)



RECOMMENDATIONS

DSS approve proposed DSS-65 downtime for Antenna Cabinet Drive Refurbishment

CLU2 SSO move all passes from DSS-16/27/24/15/14 to DSS-27/24/15 in weeks 09, 12 and 13. Move all passes from DSS-46/34/45/43 to DSS-46/34/45. Move all passes from DSS-66/54/65/63 to DSS-66/54 in weeks 09, 11 & 12. (1,2)

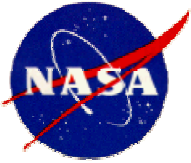
DSS Maintenance reduce support duration from 8 hours to 6 hours at DSS-15,24,34 and 45 in weeks 09 – 10. (2,3)

GSSR Mercury delete support in week 09. (1)

M01O Mapping move 1 pass from DSS-24,25,55 to DSS-34,45 and MSPA with MRO Prime Science in week 09. (4)

MEX Orbital Science move all passes from DSS-15,65 to DSS-15,45,54 in weeks 10 – 13. Delete 7 passes at DSS-15,65 in week 09. Orbital Science MSPA with MGS Beta Supplement move all 7 passes from DSS-15,65 to DSS-15,45,54 in week 09. (2)

MGS Mapping and Beta Supplement MSPA with MEX Orbital Science move all 7 passes from DSS-15,65 to DSS-15,45,54 in week 09. Mapping and Beta Supplement move all 6 standalone passes from 34BWG2 to DSS-34,45 and MSPA with MRO Prime Science in week 09. (2,4)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

MRO Prime Science MSPA 1 of 7 standalone passes at DSS-34,45 with M01O Mapping. MSPA the remaining 6 passes at DSS-34,45 with MGS Mapping and Beta Supplement. (2,3)

ULYS Nutation reduce pass duration from 5 hours to 4 hours in week 09. Move all passes from DSS-24,34 to DSS-34,43 and reduce pass duration from 5 hours to 4 hours in week 12 and 13. (3)

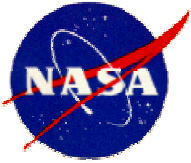
VGR1 D/L reduce all passes at DSS-25, DSS-26 and DSS-55 from 8 hours to 4 hours. (4)

VGR2 reduce all passes from 8 hours to 4 hours. Move all passes from DSS-43,45,34 to DSS-45,34 in week 09. (1)

Note:

RFC Cat M&E X/Ka-Band simultaneous 24-hour supports at DSS-26\55 in week 09 and DSS-26\34 in week 10 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CLU2, DSS, IMAG, M01O, MRO, MUSC, NHPC, STA, STB, and ULYS.

RFC CAT M&E S/X-Band simultaneous 24-hour supports at DSS-15/45 in weeks 12 and DSS-15\65 in week 13 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CLU2, DSS, MEX and MRO.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13) (continued)



ANALYSES

1. (70M) The overall projected unsupportable time is moderate to extreme for DSS Bearing and Routine Maintenance, CLU2, GSSR, M010, MEX, MGS, MRO, NHPC, SOHO, ULYS and VGR2. The unsupportable time is due to significant overlap between Mars and Sun view period. It is further compounded by MRO 20-degree view period constraints on the 34BWG stations leading to additional loading on the 70M.
2. (34HEF) The overall projected unsupportable time is moderate to extreme for DSS Maintenance, MEX, MGS, SOHO, VGR2. Contention is due to Mars missions and Sun view period overlap and is compounded by the simultaneous 24-hour RFC CAT S/X requirements and the DSS-65 downtime.
3. (34BWG1) The overall projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, IMAG, M010, MRO, NHPC, SOHO, STA, ULYS and VGR2. Contention is due to significant view period overlap between Mars missions and Sun and is compounded by the simultaneous 24-hour RFC CAT X/Ka requirements.
4. (34BWG2) The overall projected unsupportable time is moderate to extreme for DSS Maintenance, M010, MEX, MGS, MRO, MSGR and VGR1. The unsupportable time is view period overlap between Mars missions and Sun and is compounded by the simultaneous 24-hour RFC CAT X/Ka requirements.

Contention levels on the 26M and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – April (Weeks 14 - 17)



EVENTS

DSS-54 proposed downtime (X/X-Ka Band Installation) beginning in week 14

ATOT A01 Imagery observation event at DSS-43 in week 17

Cassini Tour

GSSR Mercury Radar observations at DSS-14 in weeks 16

Hayabusa (MUSES-C) Earth Re-Entry phase

Mars Express Bi-Static Radar in week 15 and Orbital Science, Occultation beginning in week 17

Mars Reconnaissance Orbiter Ka Ops Demo and Prime Science

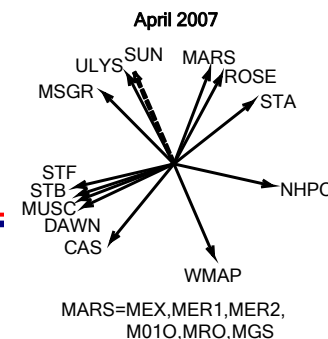
New Horizons Jupiter Departure

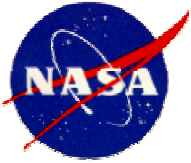
STEREO Ahead Prime Science

STEREO Behind Prime Science

Ulysses Nutation

Voyager 1 DTR Array in week 17, DOY 116





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – April (Weeks 14 - 17) (continued)



RECOMMENDATIONS

DSS approve proposed DSS-54 downtime for X/X-Ka Band Installation.

CLU2 SSO move all passes from DSS-16/27/24/15/14 to DSS-27/24/15/14. Move all passes from DSS-66/54/65/63 to DSS-66/65/63 in weeks 15 and 17. (2)

IMAG move 7 of 13 passes from the 34BWG1 subnet to DSS-45/46. Move the remaining 6 passes from the 34BWG1 subnet to DSS-24,34. Science Load move all passes from the 34BWG1 subnet to DSS-24,34. (2)

MEX Occultation move all passes from DSS-14/65 to DSS-15/65 in week 17. (1)

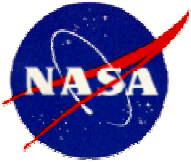
MRO Prime Science move 2 passes from DSS-14,63 to the 70M in weeks 14 and 15. (1)

STA Prime Science move all passes from DSS-26,34,54 to DSS-26,34,55. (2)

STB Prime Science move all passes from DSS-26,34,54 to DSS-26,34,55. (1)

ULYS Nutation move all passes from DSS-34 to DSS-34,43 and reduce pass duration from 5-hours to 4-hours. (2)

VGR2 move all passes from DSS-43,45,34 to DSS-45,34 in weeks 14 and 15. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

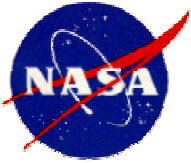
2007 – April (Weeks 14 - 17) (continued)



RECOMMENDATIONS

Note:

RFC Cat M&E X/Ka-Band simultaneous 24-hour supports at DSS-26/55 in week 15 and at DSS-26/34 in week 16 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CLU2, DSS, IMAG, MRO, STA, STB, and ULYS.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

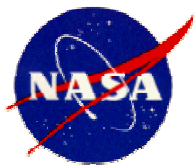
2007 – April (Weeks 14 - 17) (continued)



ANALYSES

1. (70M) The overall projected unsupportable time is moderate to severe for DSS Bearing and Routine Maintenance, CLU2, M010, MEX, MRO and VGR1. The unsupportable time is due to Mars and Sun view period overlap.
2. (34BWG1) The overall projected unsupportable time is moderate to extreme for CLU2, DSS Maintenance, IMAG, MRO, STA, ULYS and VGR2. Contention is due to view period overlap with the Mars mission and Sun view period and is compounded by the simultaneous 24-hour RFC CAT X/Ka requirement and the DSS-54 downtime.

Contention levels on the 34HEF, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – May (Weeks 18 - 22)



EVENTS

DSS-54 proposed downtime (X/X-Ka Band Installation) ending in week 21

ATOT Mission Observation quarterly epoch in week 22

Cassini Tour

EGS Global VLBI quarterly epoch at DSS-14\63 in week 21

GSSR 1862 Apollo Asteroid observations in week 19

Hayabusa (MUSES-C) Earth Re-Entry phase

Mars Express Bi-Static Radar in week 20 and Occultation support ending in week 22

Mars Reconnaissance Orbiter Prime Science

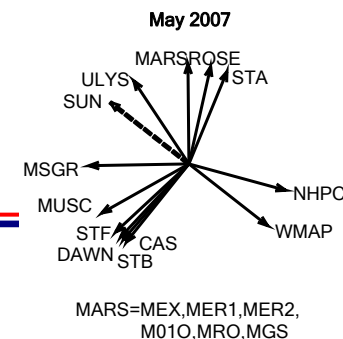
New Horizons Jupiter Departure

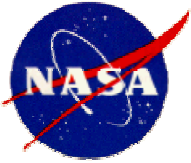
SOHO Keyhole event beginning in week 20, DOY 137

STEREO Ahead Prime Science

STEREO Behind Prime Science

Wilkinson Microwave Anisotropy Probe TCM in week 19





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – May (Weeks 18 - 22) (continued)



RECOMMENDATIONS

DSS approve proposed DSS-54 downtime for X/X-Ka Band Installation.

CAS Tour move 2 passes in week 18 and 19, and 1 pass in week 21 from DSS-24,25,26,34,54,55 to DSS-24,25,26,34,55. Move one 9-hour Array support from DSS-63/54 to DSS-63/55 in week 19. (2)

CHDR move 21 passes in weeks 18 and 19, and 14 passes in week 20 and 21 from 34BWG1 to DSS-24,34. (2)

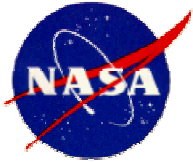
CLU2 SSO change support from DSS-66/54/65/63 to DSS-66/65/63 in weeks 19 and 21. (2)

IMAG move support from 34BWG1 to DSS-24,34 in week 18 – 21. IMAG Science Load move support from 34BWG1 to DSS-24,34 in week 18 – 21. (2)

MRO Prime Science move support from 34BWG1,34BWG2 to DSS-24,34,34BWG2 in weeks 18 – 21. (2)

SOHO Keyhole move four 4-hour passes in week 20 and two 4-hour passes in week 21 from 34BWG1 to DSS-24,34. (2)

ULYS Nutation reduce all 14 passes at DSS-34,43 in week 18 and all 14 passes at DSS-24,34,43 in weeks 20 and 21 from 5 hours to 4 hours. Move 2 of 14 passes at DSS-34,43 to DSS-24 in week 18. Move all 14 passes from DSS-34,43 to DSS-24,34,43 and reduce pass duration from 5 hours to 4 hours in week 19. (1,2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – May (Weeks 18 - 22) (continued)

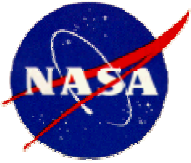
RECOMMENDATIONS

VGR2 move all 7 passes from DSS-43,45,34 to DSS-45 and reduce pass duration from 8 hours to 6 hours in weeks 18 – 21. (1,2)

Note:

RFC Cat M&E S/X-Band simultaneous 24-hour supports at DSS-15/45 in week 19 and at DSS-15/65 in week 20 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2, DAWN, MEX, MSGR, MUSC and VGR2.

RFC Cat M&E X/Ka-Band simultaneous 24-hour supports at DSS-26/55 in week 21 and at DSS-26/34 in week 22 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CHDR, CLU2, IMAG, MGS, MRO, MUSC, SOHO, STA, STB, ULYS, VGR1 and VGR2.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

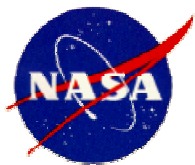
2007 – May (Weeks 18 - 22) (continued)



ANALYSES

1. (70M) Moderate unsupportable time is forecast for DSS Bearing and Routine Maintenance, M01O, MEX, ULYS, VGR1 and VGR2 in weeks 18 – 21. Contention is due to oversubscription of the subnet, specifically DSS-14 requirements for M01O Mapping, MEX Occultation and MRO Prime Science and is compounded by GSSR Asteroid 1862 Apollo events and the proposed DSS-54 downtime.
2. (34BWG1) Moderate to severe unsupportable time is forecast for DSS Maintenance, IMAG, IMAG Science Load, SOHO TSO, ULYS, and VGR2. Contention is due to oversubscription of the subnet and limited view of the Ulysses spacecraft from GDSCC and MDSCC, compounded by the proposed DSS-54 downtime.

Contention levels on the 34BWG2, 34HEF, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26)

JPL

EVENTS

DSS-63 downtime (Hydrostatic Bearing Assembly Replacement) beginning in week 24

ATOT Mission Observation quarterly epoch in week 24

Cassini Tour

Chandra Earth Eclipse beginning in week 25

EGS Calibration and EVN J-M5 quarterly epoch at DSS-14\63 in week 23

GSSR Mercury Radar Observations in weeks 24 and Mercury RSD in week 25 and 26

Hayabusa (MUSES-C) Earth Re-Entry and EOPM in week 23, DOY 156

Mars Express Bi-Static Radar and Orbital Science beginning in week 24

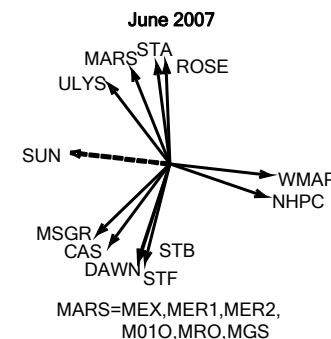
Mars Reconnaissance Orbiter Prime Science

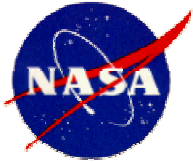
MESSENGER Venus Flyby 2 in week 23, DOY 155

New Horizons Jupiter Departure and Beacon support

SOHO Keyhole event ending week 23, DOY 157

STEREO Ahead Prime Science





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26)

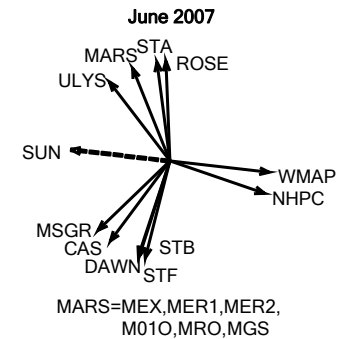


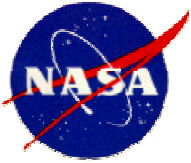
EVENTS

STEREO Behind Prime Science

Ulysses Nutation

Venus Express Bi-Static Radar 7 in week 24





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26) (continued)



RECOMMENDATIONS

DSS approve proposed DSS-63 downtime for Hydrostatic Bearing Assembly Replacement. Routine Maintenance delete 1 of 2 supports per week at DSS-14 in weeks 24 – 26.

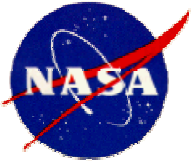
CAS Tour move one 9-hour pass in week 24 and 2 each in weeks 25 and 26 from DSS-63 to DSS-54. Change 1 of 2 Array passes from DSS-63/55 to DSS-54 only and the remaining Array pass will occur on Monday of week 24. Move three of six 9-hour passes from DSS-14 to DSS-24,25,26 in week 26.

CLU2 SSO move the 1 pass from DSS-66/65/63 to DSS-66/54/65 in week 25.

M01O DDOR move the one 1-hour support from DSS-14\63 to DSS-14\65 in week 24. M01O Mapping MSPA with MGS Mapping move all four 10-hour passes from 70M to DSS-14,43 in weeks 24 – 26. M01O Mapping MSPA with MRO Prime Science move all three 8-hour passes from 70M to DSS-14,43 in week 24. M01O Mapping move all 3 standalone passes from 70M to DSS-14,43, reduce from 10 hours to 8 hours and MSPA with MRO Prime Science in weeks 25 and 26.

MGS Mapping MSPA with M01O Mapping move all four 10-hour passes from 70M to DSS-14,43 in weeks 24 – 26.

MRO Prime Science MSPA with M01O Mapping move all three 8-hour passes from 70M to DSS-14,43 in week 24. Prime Science move all 3 passes from 70M to DSS-14,43 and MSPA with M01O Mapping in weeks 25 and 26.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26) (continued)



RECOMMENDATIONS

NHPC Cruise/Telemetry move both passes from 70M to DSS-14,43 in weeks 26. Jupiter Departure move all three passes in weeks 24 and 25, and 1 pass in week 26 from 70M to DSS-14,43.

STF move all 14 passes from 70M to DSS-14,43 in weeks 24 - 26.

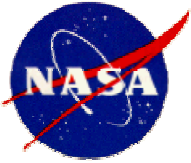
ULYS move all 14 passes from DSS-14,43 and DSS-24,43 to DSS-24,54,63 in week 23 and to DSS-24,34 in weeks 24 - 26.

VEX Bi-Static Radar 7 move both passes from 70M to DSS-14,43 in week 24.

VGR2 move all 7 passes from DSS-43,45,34 to DSS-45 and reduce from 8 hours to 6 hours in weeks 24 – 26.

Note:

RFC Cat M&E S/X-Band simultaneous 24-hour supports at DSS-15/45 in week 25 and at DSS-15/65 in week 26 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2, DAWN, MEX, MSGR and VGR2.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

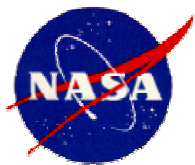
2007 – June (Weeks 23 - 26) (continued)



ANALYSES

(70M) Moderate to Severe unsupportable time is forecast for DSS Bearing and Routine Maintenance, M01O, MEX, ULYS, VGR1 and VGR2 in weeks 18 – 21. Contention is due to oversubscription of the subnet and events in support of GSSR Mercury RSD GBT and MEX Bi-Static Radar.

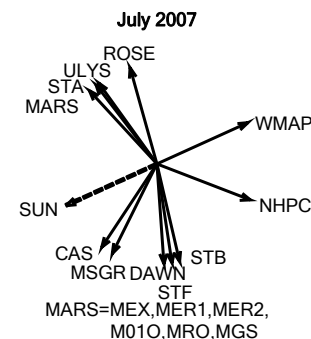
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30)



EVENTS

DSS-63 proposed downtime (Hydrostatic Bearing Assembly Replacement)

Cassini Tour

Chandra ACA Dark Current Measurement and Earth Eclipse in week 27

Goldstone Solar System Radar Mercury RSD Observations with GBT in week 30

Mars Reconnaissance Orbiter Ka Ops Demo and Prime Science

Mars Express Bi-Static Radar and Orbital Science

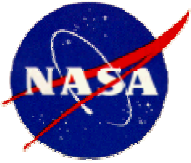
New Horizons Beacon Support and Cruise Telemetry Support

STEREO Ahead Prime Science

STEREO Behind Prime Science

Ulysses Nutation

Venus Express Movie beginning in week 30



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30) (continued)



RECOMMENDATIONS

Approve DSS-63 proposed downtime for Hydrostatic Bearing Assembly Replacement.

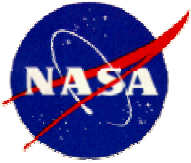
Routine Maintenance delete 1 of 2 support at DSS-14. (1)

ACE move all seven 3.5-hour passes from DSS-27 to DSS-27,66 in week 29 and all seven 3.5-hour passes from DSS-16,66 to DSS-27, 66. (JDI)

CAS move 1 support from DSS-63 to DSS-65 in week 28. (1)

CLU2 SSO move one pass from DSS-66\65\63 to DSS-66\54\65 in week 27 and 29. (JDI)

GSSR Mercury RSD with Green Bank Telescope reduce all 4 supports from 3 hours to 2 hours at DSS-14 in week 30. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30) (continued)



RECOMMENDATIONS

M01O Delta DOR move 1 support from DSS-14\63 in week 28 to DSS-14\65 in week 30.

Move 1 support at DSS-14\43 from week 28 to week 30. (1)

M01O Mapping MSPA with MGS Mapping delete all six to seven 10-Hour passes at 70M.

Add one 5 hour MSPA with MGS Mapping in weeks 28 and 29

Add two 4-hour passes at DSS-43 and MSPA with MGS Mapping in week 28 and 29

Add one 9-hour pass at DSS-43 in week 28 and 29 and MSPA with MGS Mapping

**Add three 9-hour passes at DSS-43 and MSPA with MRO Prime Science in weeks
28 – 30 (1)**

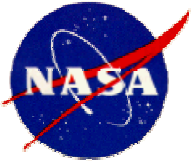
Add two 6-hour passes at DSS-14 and MSPA with MGS Mapping in week 28

Add four 10-hour passes at DSS-14,43 and MSPA with MGS Mapping in week 30 (1)

M01O Mapping add seven 8-hour passes at 34HEF and MSPA with MEX Orbital Science in weeks 27, 28 and 30. Add seven 8-hour passes at DSS-15,65 and MSPA with MEX Orbital Science in week 29. (1)

M01O Mapping add four 8-hour passes at 34BWG2 and MSPA with MRO Prime Science in weeks 27 – 29. (3)

MEX R/S Bi-Static Radar move all 8 supports from 70M to DSS-14,43. Move one of two passes from DSS-43 to DSS-14. Orbital Science move all seven 8-hour passes from DSS-15,25 to 34HEF and MSPA with M01O Mapping in weeks 27, 28 and 30. MSPA all seven 8-hour passes at DSS-15,65 with M01O Mapping in week 29. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30) (continued)



RECOMMENDATIONS

MGS Mapping MSPA with M01O Mapping delete all six to seven 10-Hour passes at 70M.

Add one 5 hour MSPA with M01O Mapping in weeks 28 and 29

Add two 4-hour passes at DSS-43 and MSPA with M01O Mapping in week 28 and 29

Add one 9-hour pass at DSS-43 in week 28 and 29 and MSPA with M01O Mapping

Add two 6-hour passes at DSS-14 and MSPA with M01O Mapping in week 28

Add four 10-hour passes at DSS-14,43 and MSPA with M01O Mapping in week 30 (1)

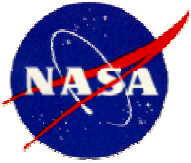
MGS Mapping and Beta Supplement MSPA all three 14-hour passes at 34BWG2 with M01O Mapping. MGS Mapping add seven 8-hour passes at 34BWG1 and MSPA with MRO Prime Science. Add three 8-hour passes at 34BWG2 in weeks 27 – 29 and seven 8-hour in week 30 and MSPA with MRO Prime Science. (2)

MRO Prime Science move all three passes from 70M to DSS-43 and increase pass duration from 8 hours to 9 hours and MSPA with M01O Mapping. Move 7 of 14 passes from 34BWG1,34BWG2 to 34BWG1 and MSPA with MGS Mapping. Move the remaining 7 passes at 34BWG1,34BWG2 to 34BWG2 and MSPA 3 passes with MGS Mapping and 4 passes with M01O Mapping in weeks 27 – 29 and 7 passes with MGS Mapping in week 30. (1,2,3)

MSGR Cruise move all three passes from 70M to DSS-26,45,55 in weeks 27 – 29. (1)

NHPC Cruise/Telemetry move both from 70M to DSS-14,43. (1)

ULYS Nutation move seven of fourteen 5-hour passes from DSS-14,43 to DSS-24,34. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30) (continued)



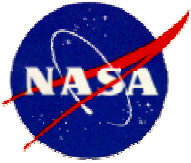
RECOMMENDATIONS

VGR1 D/L reduce all seven passes at DSS-25,26 and DSS-55 from 6 hours to 4 hours. (3)

VGR2 move all seven 8-hour passes from DSS-43,45,34 to DSS-45,34 and reduce to 6-hours. (1)

Note:

RFC Cat M&E X/Ka-Band simultaneous 24-hour supports at DSS-26/55 in week 27 and DSS-26/34 in week 28 will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: MGS, MRO, MSGR, NHPC, STA, STB, ULYS, VGR1 and VGR2.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

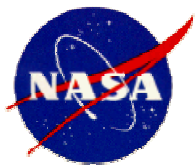
2007 – July (Weeks 27 - 30) (continued)



ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O Mapping, MEX Bi-Static Radar, MGS Mapping, ULYS Nutation and VGR2 routine support. Contention is due to significant view period overlap between Mars and Sun view, which is further compounded by proposed DSS-63 downtime.
2. (34BWG1) The projected unsupportable time is moderate to severe for DSS Maintenance and VGR2. Contention is due to significant view period overlap between Mars and Sun view, which is further compounded by RFC CAT X/Ka simultaneous 24-hour dual support at DSS-26\34 in week 28.
3. (34BWG2) The projected unsupportable time is moderate to severe for DSS Maintenance and MGS Map/Beta Supplement. Contention is due to view period overlap between Mars and Sun view.

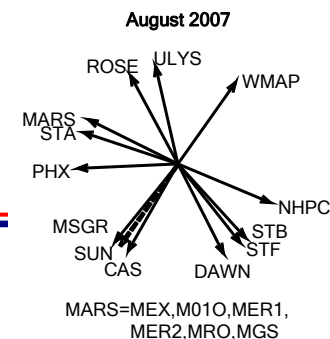
Contention levels on the 34HEF, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35)



EVENTS

DSS-63 Proposed downtime (Hydrostatic Bearing Assembly Replacement)

DSS-15 Proposed downtime (Antenna Drive Cabinet Refurbishment beginning) in week 35

ATOT A01 Imagery Observation quarterly epoch at DSS-43 in week 35

Cassini Tour

Goldstone Solar System Radar Mercury Radar and Mercury RSD Observations with GBT in week 31

Mars Reconnaissance Orbiter Prime Science

Mars Express Bi-Static Radar and Orbital Science

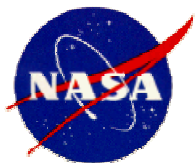
New Horizons Beacon Support and Cruise Telemetry Support

Phoenix Launch in week 31, DOY 215, TCM in weeks 33 and 34 and Delta DOR support beginning in week 34

SOHO Keyhole event beginning in week 32, DOY 222, ending on DOY 243 and Maneuver in week 35, DOY 240

STEREO Ahead Prime Science

STEREO Behind Prime Science



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35)

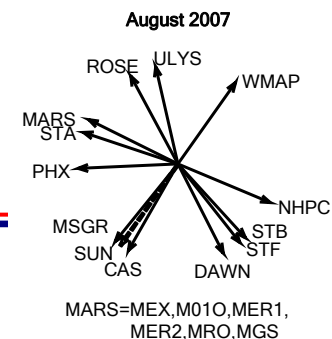
EVENTS

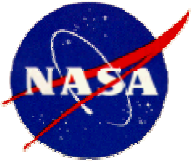
Ulysses Nutation

Venus Express Movie ending in week 34 and Bi-Static Radar # 8 in week 31

Voyager 1 MAGROL at DSS-14 in week 31, DOY 216

Wilkinson Microwave Anisotropy Probe TCM in week 35





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-63 downtime for Hydrostatic Bearing Assembly Replacement. Approve proposed DSS-15 downtime for Antenna Drive Cabinet Refurbishment beginning in week 35. Maintenance delete 1 of 2 routine supports at DSS-14. (1,2)

CAS Tour delete the all passes at DSS-63 in weeks 33 and 35. Move all passes from 34HEF to DSS-45,65 and change resource request at DSS-14/15 to DSS-14/25 in week 35. (1,2)

CLU2 SSO move passes from DSS-66/54/65/63 to DSS-66/54/65 in weeks 31,33, and 35. (1)

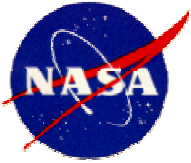
DAWN move the 1 pass from the 34HEF to DSS-45,65 in week 35. (2)

M01O Delta DOR change support resources from DSS-14\63 to DSS-14\65 in week 33. M01O Mapping and MSPA with MGS in weeks 31 – 34 and M01O Mapping in weeks 31, 32, 34, and 35 reduce all pass durations from 10 hours to 8 hours. (1)

MRO Prime Science change resource allocations from 34BWG2,34HEF to 34BWG2,DSS-45,65 in week 35 and move all passes from 70M to DSS-14,45,65. (1,2)

MGS Mapping and MSPA with M01O in weeks 31 – 34 and reduce all pass durations from 10 hours to 8 hours. (1)

MSGR Cruise move 3 passes from DSS-26,45,55 to 34HEF in week 33 and move 3 passes from the 34HEF to 34BWG1 in week 35. (2,4)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35) (continued)



RECOMMENDATIONS

NHPC Cruise/Telemetry change resource allocation for all passes from 70M to DSS-14,43.

(1)

SOHO Keyhole event delete 3 of 10 34BWG1 passes in week 33. (3)

STA Prime Science move 3 of 7 passes from DSS-26,34,54 to DSS-25,55 in week 31. (3)

STF change resource allocation for all passes from 70M to DSS-14,43. (1)

ULYS Nutation change resource allocation for all passes from 70M to DSS-14,43. (2)

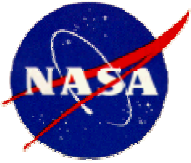
VEX Bi-Static Radar 8 passes in week 31 and Movie passes in weeks 31 and 32, change resource allocation for all passes from 70M to DSS-14,43. (1)

VGR1 reduce all pass duration from 6 hours to 4 hours at DSS-25,26 and at DSS-55. (4)

VGR2 reduce all pass duration from 8 hours to 4 hours at DSS-43,45,34. (1,2,3)

Note:

RFC CAT M&E S/X-Band simultaneous 24-hour supports at DSS-15/45 in weeks 31 and DSS-15/65 in week 32 that will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2, MGS, MRO, MSGR, PHX, SOHO Keyhole Event, ULYS, VEX, and VGR2.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

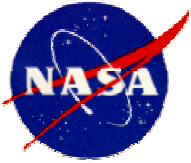
2007 – August (Weeks 31 - 35) (continued)



RECOMMENDATIONS

Note:

RFC CAT M&E X/Ka-Band simultaneous 24-hour supports at DSS-26/55 in week 33 and DSS-26/34 in week 34 that will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2, CHDR, IMAGE, MGS, MRO, MSGR, PHX, STA & STB, ULYS, and VGR 1 & VGR 2.



RESOURCE ALLOCATION REVIEW BOARD

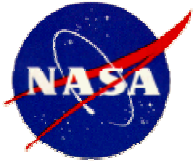
Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35) (continued)



ANALYSES

1. (70M) The projected unsupportable time is severe to extreme for DSS Maintenance, GSSR Mercury RSD M01O, M01O Mapping and MSPA with MGS, SOHO Keyhole Event in week 35, ULYS Nutation, and VGR1 MAGROL in week 31. The projected unsupportable time is moderate for Cassini, MEX Bi-Static Radar, MRO Prime Science and VEX Bi-Static Radar. The projected unsupportable time is due to oversubscription in the Mars view period and approximately 50 to 100 percent view period overlap with DSS maintenance. The unsupportable time is further compounded by the proposed downtimes for Hydrostatic Bearing Replacement at DSS-63 and for Antenna Drive Cabinet Replacement at DSS-15.
2. (34HEF) Moderate unsupportable time is forecast for DSS Maintenance in weeks 32 - 34, due to maintenance (daylight) view period overlap with the Mars and Saturn view period. The following missions will be affected by the proposed DSS-15 downtime for Antenna Drive Cabinet Replacement in week 35: CAS, DAWN, MRO, MSGR, and PHX.
3. (34BWG1) Moderate unsupportable time is forecast for DSS Maintenance in week 31 and 33 and for SOHO Keyhole Event in week 33 due to maintenance (daylight) view period overlap with the CAS, Mars missions, MSGR, PHX launch, STA and SOHO view periods.
4. (34BWG2) Moderate unsupportable time is forecast for DSS Maintenance in week 32 - 35 and for PHX Cruise in week 33 due to maintenance (daylight) view period overlap with the CAS, Mars missions, MSGR, PHX and VGR1.



RESOURCE ALLOCATION REVIEW BOARD

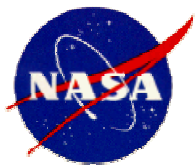
Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35) (continued)



ANALYSES

Contention levels on the 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39)

EVENTS

DSS-63 Proposed downtime (Hydrostatic Bearing Assembly Replacement) ending in week 37

DSS-15 Proposed downtime (Antenna Drive Cabinet Refurbishment) ending in week 39

ATOT A01 Astrometry semi-annual event at DSS-43 in week 37

Cassini Tour

Goldstone Solar System Radar Mercury Radar Observations in week 39

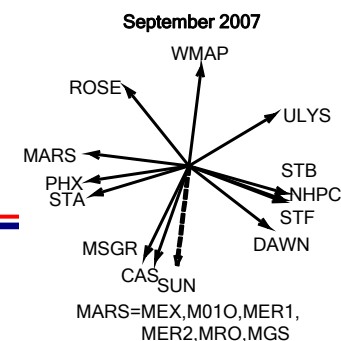
Mars Reconnaissance Orbiter Ka Ops Demo and Prime Science

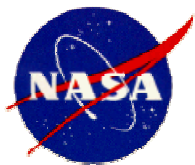
Mars Express Bi-Static Radar and Orbital Science

New Horizons Beacon Support and Cruise Telemetry Support ending in week 37 and Checkout beginning in week 38

Phoenix ACS NAV in week 37, TCM-2 support in week 39 and Delta DOR support

SOHO Keyhole ending in week 36 and HSO continuous support beginning in week 37





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39)



EVENTS

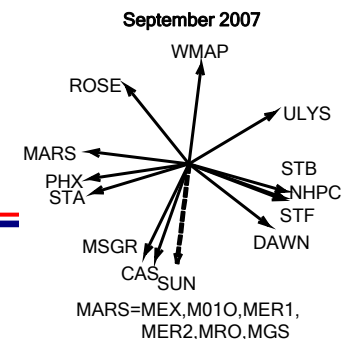
STEREO Ahead Prime Science

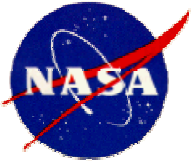
STEREO Behind Prime Science

Voyager 1 MAGROL on DOY 271 in week 39 at DSS-14

Voyager 2 DTR Playback in week 36, DOY 248, ASCAL on DOY 254 and MAGROL on DOY 257 in week 37 at DSS-43

Wilkinson Microwave Anisotropy Probe Maneuver in week 37





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-63 downtime for Hydrostatic Bearing Assembly Replacement and the proposed DSS-15 downtime for Antenna Drive Cabinet Refurbishment. Delete 1 of 2 DSS-14 Routine Maintenance supports in week 36 and reduce 1 of 2 supports from 8 hours to 6 hours in week 37. (1)

ATOT A01 Astrometry move support from week 37 to week 38. (1)

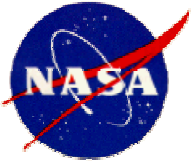
CAS Tour move support from DSS-14/15 to DSS-14/25 in week 39. Move supports from 34HEF to DSS-25,45,65 in weeks 36 - 39. (2)

CLU2 SSO move supports from DSS-16/27/24/15/14 to DSS-27/24/14 in weeks 36 - 39 and from DSS-66/54/65/63 to DSS-66/54/65 in week 37. Move MSO supports from DSS-16/27/24/15 to DSS-27/24/14 in week 37. (2)

M01O DDOR move supports from week 37 to week 38. (1)

MEX Orbital Science move supports from DSS-15,25 to DSS-25,55. (2)

SOHO Keyhole move supports from 70M/26M to DSS-43/46,14/27 and from 34H/26M to DSS-45/46, 65/66 in week 36. (1,2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39) (continued)

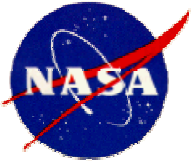


RECOMMENDATIONS

Note:

RFC CAT M&E S/X-Band simultaneous 24-hour supports at DSS-14/45 in weeks 37 and DSS-14/65 in week 38 that will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: CAS, CLU2, M01O, MGS, MRO, MSGR, NHPC, PHX, SOHO Keyhole Event, STF, ULYS, VEX, VGR1, VGR2, and WMAP.

RFC CAT M&E X/Ka-Band simultaneous 24-hour supports at DSS-26/55 in week 39 that will require accommodation from the following projects/users directly or indirectly during the Mid-Range Scheduling negotiation process: MGS, MRO, MSGR, STA & STB, and VGR1.



RESOURCE ALLOCATION REVIEW BOARD

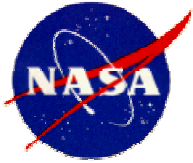
Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39) (continued)

ANALYSES

1. (70M) Moderate to severe unsupportable time is projected for DSS Maintenance, in weeks 36, 37 and 39; moderate unsupportable time is forecast for GSSR Mercury Observation in week 39, M01O Mapping and MSPA with MGS, MEX Bi-Static Radar and VGR 2 ASCAL in week 37. The projected unsupportable time is due to oversubscription in the daylight and Mars view period and 50 percent of Mars view period overlap with Maintenance (daylight) view period and is further compounded by the proposed DSS-63 downtime.
2. (34HEF) The following missions were affected due to the proposed DSS-15 downtime for Antenna Drive Cabinet Refurbishment: CAS, CLU2, MEX and SOHO.

Contention levels on the 34BWG1, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Supplemental Materials



Supplemental materials may be found on the RAPSO Homepage at:
<http://rapweb.jpl.nasa.gov>

- ◆ **Ongoing Users Negotiated Requirements**
Individual User Loading Profiles
- ◆ **Resource Allocation Review Board Information**
Supplemental Yearly Information